

Notice of Allowability

Application No.

09/988,634

Applicant(s)

YAMADA, MAKOTO

Examiner

Wes Tucker

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 2-22-05.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ The drawings filed on 22 February 2005 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's response to the last Office Action, filed February 22nd 2005 has been entered and made of record.

2. Applicant has not amended any claims, and added new claims 7-10. Claims 1-10 are pending.

3. Applicant's arguments, filed February 22nd 2005, with respect to the rejections of claims 1-6 U.S.C. 102(b) have been fully considered and are persuasive for at least the following reasons:

4. Applicant points out the differences between the cited prior art and the present invention with respect to independent claims 1, 3, and 5.

Allowable Subject Matter

5. Claims 1-10 are allowed.

The following is an examiner's statement of reasons for allowance:

With regard to claim 1, the reference to Imai discloses a method of combining a first image of large pixel number and small channel number with a second image of small pixel number and large channel number to create a third image of large pixel number and large channel number (p.224 and abstract).

Imai also uses principal component analysis to achieve the combination third image. Applicant argues that Imai does not disclose the second step of claim 1 reading "performing principal component analysis on the image data in a specified region

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including a point in said second image of small pixel number and large channel number which corresponds to a pixel of interest at a specified point in said first image of large pixel number and small channel number." Examiner agrees that the principle component analysis is not expressly disclosed to be performed on the first or second image, but the images are matched which would involve the principle component analysis to be performed in corresponding areas of both images.

With regard to the third step of "determining coefficients in linear sums so that said linear sums of a specified number of principal component vectors obtained by said principal component analysis render output values of said pixel of interest in said first image of large pixel number and small channel number" the reference of Smith discloses determining coefficients in linear sums in the use of principal component analysis (column 3, lines 57-67 and column 4, lines 1-17) but does not disclose or fairly suggest that the coefficients could be used to render output values in the environment of the invention of Imai's image combination. Neither Smith or Imai or the combination thereof teach or fairly suggest the fourth and final step of "determining spectral information of said pixel of interest based on said coefficients to create said third image of large pixel number and small channel number." None of the found prior art teaches the calculation of the present invention in the claimed detail.

The other independent claims 3, 5 and 9 claim the same features as claim 1 and are deemed allowable along with their subsequent dependent claims for the same reasons presented.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker

6-10-05


AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600